



Commonwealth of Massachusetts

Long-Term Fiscal Policy Framework

Executive Office for Administration & Finance
May 2012

Introduction

During the past five years, the Patrick-Murray Administration and the Legislature have made the difficult choices needed to ensure that the Commonwealth has responsibly managed state government with the limited resources available. This fiscal discipline has been validated by the national credit rating agencies, which have awarded the state its highest ever bond ratings.¹ But going forward, and even as the economy recovers, the Commonwealth will continue to face a challenging fiscal landscape.² The establishment of a Long-Term Fiscal Policy Framework to inform and guide annual budgetary decisions will help the Commonwealth ensure that the level of vital government services and investments is sustainable over time based on existing resources.

The Patrick-Murray Administration is the first in the Commonwealth's history to develop a formal policy framework that sets out goals for long-term sustainability informed by independent revenue and economic forecasts. This Long-Term Fiscal Policy Framework includes three goals: (1) structural balance; (2) sustainable spending growth; and (3) disciplined management of long-term liabilities.

- 1) **Structural balance** is achieved when budgetary spending is based on sustainable levels of revenue, excluding fluctuations that can occur as a result of the economic cycle.
- 2) **Sustainable spending growth** is targeted to maintain structural balance throughout a five-year rolling forecast period and evaluated by comparing annual spending growth to projected long-term rates of revenue growth.³
- 3) **Disciplined management of long-term liabilities** is necessary to protect intergenerational equity by preventing the costs associated with debt and unfunded retirement benefit obligations from crowding out other government services and investments in the future.

¹ See <http://www.mass.gov/treasury/debt-management/key-resources/rating-report-history-chart.html>

² See pp. 28-29 of the Conference Draft of "Disentangling the Channels of the 2007-2009 Recession" by James Stock and Mark Watson on the Brookings website: <http://www.brookings.edu/economics/bpea.aspx>

³ It should be noted that the purpose of this document is not to assess whether the level of services and investments that can sustainably be provided is adequate or excessive. The appropriate role of government and whether government should be doing more or less is a policy question that this analysis does not attempt to address. Rather, this Long-Term Policy Framework is intended to help ensure that the level of government services and investments currently provided is sustainable over time based on existing resources.

GFOA Best Practices¹	GASB Fiscal Sustainability Information Components²
<ul style="list-style-type: none"> • Technically sound process - including revenue and expenditure forecasts, for sound decision making • A collaborative and participative approach to planning - involving many different types of stakeholders • Policy driven process – driven by both financial policies and government priorities • Connection to budget process – to allow for implementation of financial strategies • Flexible approach and processes –planning that conforms to government needs in a timely manner 	<ul style="list-style-type: none"> • Projections of total cash inflows and major individual cash inflows • Projections of total cash outflows and major individual cash outflows • Projections of financial obligations and major individual financial obligations (includes bonds, pensions, OPEB and other long-term contracts) • Projections of annual debt service payments (principal and interest) • Narrative discussion of major intergovernmental service interdependencies

- to develop these benchmarks include best practices for long-term planning recommended by

The flowchart illustrates the budget development process for FY2013-2014. It begins with 'Macro Assumptions' (inflation, growth, etc.), leading to 'Revenue / Spending Growth'. This is followed by 'Caseload Forecasting*', which then feeds into the 'Five Year Model'. The 'Five Year Model' produces a 'FY13-14 \$1.6B 2013-2014' budget, which is then used for 'FY13 - FY17' forecasting. A 'Tax Revenue/Actual/FY Est. or Trend* FY 2003 - FY 2015' chart is also shown, indicating a historical trend line.

Macro Assumptions

	Scenario 1	Scenario 2	Scenario 3
Long Term Macro Assumptions			
Inflation ¹	2.30%	2.30%	2.30%
Real GDP Growth ²	2.10%	2.10%	2.10%
Real GDP Growth ³	4.4%	4.4%	4.4%
Tax Revenue ⁴			
- FY13	4.5%	4.5%	4.5%
- FY14	6.0%	6.0%	6.0%
- FY17	4.4%	4.4%	4.4%
Excess Health Care Cost Growth ⁵	2.0%	0.0%	2.0%

Revenue / Spending Growth

Caseload Forecasting*

Five Year Model

FY13-14 \$1.6B 2013-2014

FY13 - FY17

Tax Revenue/Actual/FY Est. or Trend* FY 2003 - FY 2015

*Actuals reflect adjustments for significant changes in the law prior to FY 2012. Historical trend is a guide for illustrative purposes.

*Caseload Forecasting is part of the existing budget process and will be enhanced for purposes of FY 2014 budget development. Refer to Section 4 for more detail.

the Government Finance Officers Association (GFOA), proposed standards for measuring fiscal sustainability prescribed by the Government Accounting Standards Board (GASB) and an analytic framework developed by the Executive Office for Administration and Finance (A & F). These inputs are referenced throughout this document and summarized in Table 1 and Figure 1.

Using these policy benchmarks, Governor Patrick's FY 2013 budget proposal supports the achievement of our long-term fiscal goals as follows:

- **Structural Balance:** The Administration's budget proposal is in structural balance based on the projected use of \$541 M in one-time solutions (or \$446 M net of \$95 M in projected Stabilization Fund deposits) compared to an estimated \$1.032 B cyclical deficit in tax revenue that is the result of the economy operating below its sustainable capacity. See Section 1D for details.
- **Sustainable Spending Growth:** Projected spending growth of 3.4% for FY 2013, net of federal reimbursements, is within the long-term policy benchmark of 4.0% that is based on estimated long-term rates of total revenue growth. Five-year projections, however, indicate that annual spending growth could increase to 5.0% by FY 2015 and that structural deficits will emerge in FY 2016 and FY 2017. This increased rate of spending growth is driven by the assumption that excess growth in health care costs will continue at a level that is consistent with both historic trends and projected rates of growth estimated by the Congressional Budget Office (CBO).⁴ In the absence of other solutions, differences between recurring revenue and recurring spending would result in structural deficits of over \$300 M annually by FY 2017 and deplete 75% of the Stabilization Fund by the end of the five-year forecast. Building on recent success of the Patrick-Murray Administration to contain growth in health care costs is therefore critical to achieve fiscal sustainability.

Scenario analysis using a five-year financial model indicates that growth in health care spending would need to be reduced by nearly 2 percentage points in order to maintain structural balance and maintenance funding for existing services in other areas of government. This reduction in health care cost growth, however, would only provide for maintenance level spending for existing programs and would not allow for increased investments for transportation, education, restoration of past budget cuts, or other purposes. See Section 2.

Revenue and spending growth rates for this benchmark are calculated net of federal reimbursements because these inflows (e.g. Medicaid reimbursements) typically

⁴ Excess growth refers to "the extent to which the annual growth rate of health spending per beneficiary – adjusted for demographic characteristics of the relevant populations – is assumed to exceed the annual growth rate of nominal gross domestic product per capita."

Congressional Budget Office. "CBO's 2011 Long-Term Budget Outlook." Chapter 3. June 2011.

represent a fixed percentage of program cost.⁵ As a result, excluding reimbursements provides a more useful comparison of “net” spending relative to the Commonwealth’s other sources of revenue. Note also that the long-term policy benchmark for spending growth may change with updates to underlying assumptions and that spending may exceed the benchmark in certain years - particularly during periods of economic recovery - provided that structural balance is maintained over the five-year forecast period.

- **Long-Term Liability Management:** The policy objective for long-term liabilities is to implement a comprehensive plan to manage debt and reduce unfunded retirement liabilities over time. The disciplined management of long-term liabilities is necessary to ensure that the decisions made to balance the budget today do not result in shifting fiscal burdens to future generations. The analysis in Section 3 identifies the Commonwealth’s Debt Affordability Analysis and policies currently in place to address unfunded pension liabilities. This section also acknowledges the need for additional measures to address unfunded liabilities for retiree health care. These liabilities, which are also referred to as Other Post Employment Benefit or “OPEB” obligations, total over \$16 B for employees and retirees of the state and are estimated to be \$25 B or more for cities and towns in the Commonwealth.⁶

Document Road-Map

Section 1 describes the concept of structural balance and the long-term tax revenue forecast for the Commonwealth, as well as policy benchmarks for the allowable use of one-time resources, Stabilization Fund deposits, and the allowable use of excess tax revenue in the state budget. Section 2 includes an analysis of sustainable spending growth under different scenarios using the five-year model. Section 3 outlines existing policies to manage long-term liabilities and the need to further address unfunded liabilities associated with OPEB. Section 4 identifies areas for further study to enhance the Long-Term Fiscal Policy Framework. The appendices include a glossary of the technical terms used throughout the document (Appendix A) and the detailed output from the five-year model (Appendix B).

The long-term tax revenue forecast, five-year model, and analyses of long-term liabilities were developed using models and assumptions that will be updated periodically as additional information becomes available. The Patrick-Murray Administration intends to revisit these analyses semi-annually beginning with the passage of the final FY 2013 budget that is expected

⁵ The “net of federal reimbursements” growth rates are calculated by reducing total revenue and total spending by the amount of federal reimbursements projected in each fiscal year. Note that the five-year model does not yet account for the impact on the Commonwealth of National Health Care Reform, including the expectation that the state will receive additional federal revenue from increases to reimbursement rates for newly eligible state plan members, or potential reductions in reimbursements that may result from federal deficit reduction initiatives. See Section 4 - Areas for Further Study.

⁶ The State’s liability is based on the 1/1/2011 actuarial valuation. Massachusetts Taxpayers Foundation estimates that state and municipal OPEB liabilities total between \$40 B and \$45 B. See Massachusetts Taxpayers Foundation. “The Crushing Burden of Municipal Retiree Health Care Liabilities.” January 2012.

by the end of June 2012. These updates will reflect new trends in revenue growth, spending, and other factors.

Section 1 – Structural Balance and Long-Term Tax Revenue Forecasting

1A. Overview

Structural balance is achieved when budgetary spending is based on sustainable levels of revenue and does not include excess spending that would result in a structural deficit. When the economy is operating below its sustainable capacity (or below “full employment”),⁷ the policy benchmark to evaluate structural balance compares the cyclical deficit in tax revenue to the amount of one-time solutions included in the budget to offset this deficit. When the economy is operating above its sustainable capacity (or above full employment), the policy benchmark to evaluate structural balance compares the cyclical surplus in tax revenue to the amounts deposited into the Stabilization Fund. These policy benchmarks are based on a framework for long-term tax revenue forecasting developed by the Executive Office of Administration and Finance (A & F) in collaboration with the Commonwealth’s Office of Tax Policy Analysis (OTPA), using revenue projections provided by outside economists. The Governor’s FY 2013 budget proposal is in structural balance based on these benchmarks because the proposed use of \$541 M in one-time resources, or \$446 M net of Stabilization Fund deposits,⁸ is significantly less than an estimated \$1.032 B cyclical deficit.⁹ The goal to maintain structural balance is further supported by policies that account for actual-to-budgeted variances in tax revenue and place limits on the use of non-recurring sources of tax revenue in the budget.

1B. Structural Balance Policy Framework

Government budget gaps are comprised of two sources of fiscal imbalance: cyclical and structural.¹⁰ Cyclical imbalance occurs when an economy is operating at a level that is over or under its sustainable capacity, and is reflected in fluctuations in tax revenue as well as enrollment in welfare safety net programs.¹¹ The FY 2013 Consensus Tax Revenue estimate, for example, reflects a cyclical deficit as the economy is still recovering from the recession and

⁷ The terms “sustainable capacity” and “full employment” both refer to an economy that is producing the maximum level of output that will not result in excess rates of inflation. These terms are used interchangeably in this document.

⁸ The \$541 M in one-time resources (See Table 2) includes \$400 M in Stabilization Fund resources. The “net” use of Stabilization Fund and total one-time resources is \$305 M and \$446 M, respectively, after taking account for the projected deposit of \$95 M into the Stabilization Fund from tax revenue from capital gains above \$1 B (See Section 1E. Related Policy Benchmarks).

⁹ The difference between the use of \$446 M in one-time solutions and the estimated cyclical deficit of \$1.032 B provides a margin of safety that is considered prudent based on statistical analysis which indicates that we can be 80% confident that the actual size of the cyclical deficit is equal to or greater than \$446 M and 85% confident that it is equal to or greater than the net use of \$305 M in Stabilization Fund balances. The formal inclusion of these statistical measures as policy benchmarks is noted in Section 4 - Areas for Further Study.

¹⁰ Organisation for Economic Co-Operation and Development. *Government at a Glance 2011*. July 2011.

¹¹ Ibid.

operating below its sustainable capacity. This stands in contrast to the cyclical surpluses and excess tax revenue that existed before the recession, most notably during FY 2006 – FY 2008, when the economy was operating above a sustainable level. Structural imbalance refers to any difference between recurring spending and recurring revenue across the economic cycle. Structural imbalance, therefore, is the amount of any budget gap excluding cyclical imbalance. See Appendix A for a glossary of terms.

The formula **Total Budget Gap = Structural Imbalance + Cyclical Imbalance** provides a framework to evaluate structural balance throughout the economic cycle. During periods of cyclical deficit, structural balance is achieved so long as the use of one-time solutions to close any budget gap does not exceed the level of cyclical deficit. This deficit, as discussed above, includes the shortfall in tax revenue compared to the level that would be expected if the economy were operating at full employment.¹² The use of one-time resources during a period of cyclical deficit, however, can only be rationalized if policies are also in place to prevent over-spending during periods of cyclical surplus. To maintain structural balance during a period of cyclical surplus, there should be limitations on the use of one-time resources and requirements to deposit excess tax revenue into the Stabilization Fund.

Based on this framework for maintaining structural balance, the Administration has adopted the following policies: (1) in a state of cyclical deficit, the allowable use of one-time budget solutions should be limited to not more than the level of cyclical deficit and (2) in a state of cyclical surplus, the budget should not rely on any one-time resources and all of the excess tax revenue that is associated with the economy operating above its sustainable capacity should be deposited into the Stabilization Fund. Note also that the Long-Term Fiscal Policy Framework currently takes a conservative posture by defining structural balance as the absence of a structural deficit (rather than quantifying any estimate of structural surplus) and by not including estimates for sources of cyclical deficit other than tax revenue. See Appendix D for a more formal treatment of the development of these policy benchmarks.

Additional measures to expand the analysis of structural balance are discussed in Section 4 – Areas for Further Study. These include estimates of cyclical imbalance associated with enrollment in welfare and safety net programs, benchmarks to ration one-time resources across the economic cycle, indicators to evaluate structural balance during periods of cyclical surplus, and statistical methods to assess the estimates of cyclical imbalance.

1C. Actual-to-Budgeted Variance in Tax Revenue

The Administration has also established policies to maintain structural balance in response to differences between actual and budgeted levels of tax revenue during a fiscal year. For periods of cyclical deficit (e.g. FY 2013) the Administration's policy requires adjustments to the use of one-time solutions in the event that actual tax revenues are 1% percent higher or are lower than

¹² A cyclical deficit may also include higher spending for welfare safety net programs.

the Consensus Tax Revenue estimate on which the budget was based. If actual tax revenue is more than 1% above the original Consensus Tax Revenue estimate, the Administration's policy is that at least half of any excess over 1% will be used to reduce the use of Stabilization Funds or to make additional deposits into the Stabilization Fund. This is consistent with the Commonwealth's actions in FY 2011 when the majority of \$1.4 B in tax revenue above the Consensus Tax Revenue Estimate was used to increase the Stabilization Fund balance by over \$800 M, relative to the level projected when the budget was signed into law.¹³ This discipline is expected to continue in FY 2012, based on a projected \$395 M increase in forecast vs. budgeted tax revenue (or 1.9% of Consensus Tax Revenue) and an expected net reduction in the use of Stabilization Fund resources of at least \$187 M (or .7% of FY 2012 Consensus Tax Revenue) as compared to the FY 2012 budget. For circumstances where actual tax revenue is below the Consensus Tax Revenue estimate, the Administration's policy, to ensure a balanced solution, is that no more than half of any such shortfall be addressed through the use of one-time resources.

The Administration has also established similar policies for periods of cyclical surplus. In the event that tax revenue is greater than the Consensus Tax Revenue estimate during a period of cyclical surplus, it is the Administration's policy that any such excess be deposited into the Stabilization Fund or applied to necessary one-time investments. In the event that actual tax revenue is less than the original Consensus Tax Revenue estimate during a period of cyclical surplus, the Administration's policy is that any such shortfall be reflected as a reduction to the amount of deposits into the Stabilization Fund.

1D. Measuring Structural Balance

The Governor's FY 2013 budget proposal achieves structural balance based on an estimated \$1.032 B cyclical deficit and the use of \$446 M in one-time resources, net of Stabilization Fund deposits (see Table 2). The cyclical deficit reflects the difference between the FY 2013 consensus tax revenue forecast and the estimated amount of tax revenue that the Commonwealth would generate if the economy were at its sustainable capacity, represented by the revenue trend line in Figure 2.¹⁴

The \$446 M limitation on the use of one-time resources provides a significant margin of safety in comparison to the cyclical deficit¹⁵ and the \$305 M limitation on the net use of Stabilization Funds will maintain over \$1 B in Stabilization Fund balances at the end of FY 2013 (See Table 2 and the FY 2013 Budget Recommendation Section of the "Budget Development" Section in Governor Patrick's FY 2013 Budget proposal). The Commonwealth had the third highest

¹³ Actual Tax Revenue of \$20.517 B was \$1.439 B over the original Consensus Tax Revenue estimate of \$19.078 B. The \$800 M improvement in the Stabilization Fund balance as compared to budgeted levels reflects a net deposit of \$709 M plus an additional \$100 M which reflects an expected withdrawal from the fund at the time the budget was signed, which never occurred.

¹⁴ The Center for Budget and Policy Priorities recently completed a projection of what aggregate state government tax revenues would be had the pre-recession trend continued. See "States Continue to Feel Recession's Impact." <http://www.cbpp.org/cms/index.cfm?fa=view&id=711>

¹⁵ See footnote 9

Stabilization Fund balance in the country at the end of FY 2011,¹⁶ and the balance in the Stabilization Fund projected at year-end FY 2013, based on the Governor's FY 2013 budget proposal, will provide sufficient resources to support the balance of the economic recovery and protection in the event of another economic slowdown.

Table 2
FY 2012 and FY 2013 One-Time Resources

\$ in Millions			
	FY 2012	FY 2013*	Change
Budgetary Resources:			
FY11 Resources Used to Support Ongoing FY12 Costs	202	-	(202)
Stabilization Fund Resources	185	400	215
Abandoned Property	85	-	(85)
Delay FAS 109 Reduction	46	46	-
Trust Fund Resources	43	-	(43)
Sale of Assets:	12	-	(12)
Non-Budgetary Resources:			
Group Insurance Trust Funds	-	40	40
Quasi Public Contributions	26	11	(15)
Commonwealth Care Reserves	21	44	23
TOTAL ONE TIME RESOURCES	620	541	(79)
Less: Stabilization Fund Deposits	(178)	(95)	83
TOTAL ONE TIME RESOURCES NET OF DEPOSITS	442	446	4

MEMO: Net use of stabilization funds in FY 2013 \$ 305 M

* Based on Governor's FY 13 Budget Proposal

1E. Long-Term Tax Revenue Forecast

The foundation for the long-term tax revenue forecast are 10-year tax revenue projections developed by outside economists for the FY 2012 - FY 2021 time period. These forecasts also include an estimate of the long-run "steady state" tax revenue growth rate, which reflects the level of annual tax revenue growth that may be expected over the next 10 to 20 years when the economy is operating at full employment. This steady state growth is used to develop the long-term trend line for tax revenue that is included in Figure 2 and referenced in Table 3.¹⁷

A summary of the external forecasts, the Administration's estimates for long-term tax revenue growth, key assumptions and calculations are reflected in Table 3.

¹⁶ The National Governors Association and the National Association of State Budget Officers. "The Fiscal Survey of States: Fall 2011."

¹⁷ The imputed revenue-trend line is developed using the FY 2021 tax revenue estimate for each forecast, discounted for the steady-state rate of revenue growth and calculating trend revenue for each year "t" between the current year and year "s," the final year forecasted, where "g" is the long-run steady state growth rate.

For year t<s: Tax Revenue_t = (Tax Revenues)/(1+g)^(s-t)

For year t>s: Tax Revenue_t = (Tax Revenues)*(1+g)^(t-s)

Figure 2

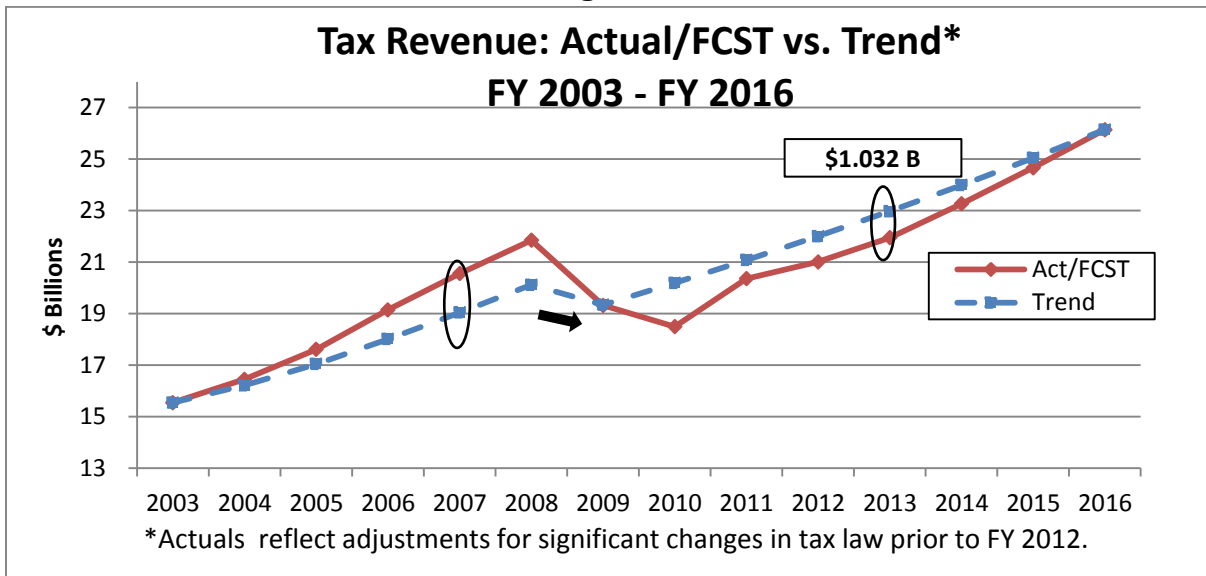


Table 3

Commonwealth of Massachusetts

Long-Term Tax Revenue Forecast Summary*

FY 2012 - FY 2021 (\$ Ms)

Tax Revenue Assumptions

(1)

FY12 Consensus Tax Revenue

\$21,010

FY13 Governor's Budget Proposal

\$22,104 (\$21,950 M Consensus Tax Revenue plus \$154 M in tax initiatives)

External Forecasts

Key Data Points

(2)

FY16 Tax Revenue Forecast

\$25,861

\$26,461

\$27,487

\$26,326

FY21 Tax Revenue Forecast

\$31,344

\$32,621

\$33,368

\$32,651

Compounded Annual

Growth Rates (CAGR)

(1)

FY12-FY21

4.5%

5.0%

5.3%

5.0%

FY14-FY16 (Recovery)

5.4%

6.2%

7.5%

6.0%

Long-Run Steady-State

4.0%

4.4%

4.5%

4.4%

Calculation of Estimated Cyclical Shortfall

A) FY13 Trend

(3)

\$22,898

\$23,052

\$23,536

\$23,136

B) FY13 Governor's Budget Proposal

\$22,104

\$22,104

\$22,104

\$22,104

C) FY13 Estimated Cyclical Shortfall (A-B)

-\$794

-\$948

-\$1,432

-\$1,032

MEMO: FY 2012 Cyclical Shortfall

-\$1,151

(1) Growth calculations use FY 2012 and FY 2013 consensus revenue. Any variance between consensus tax figures and individual forecaster estimates are assumed to be timing differences that are resolved in FY 2014 - FY 2015

(2) includes assumed inflation for FY14-21 2.30%

(3) FY13 Trend Tax Revenue = (FY21 Tax Revenue Forecast)/(1+4.4%)⁸

* Forecasts were received in December 2011 and were subsequently adjusted for consensus revenue estimates and proposed changes in the Governor's FY 2013 Budget

These results show strong revenue growth of 6% annually during a projected economic recovery (FY 2014 – FY 2016), a steady state growth estimate of 4.4% applied to the period

between FY 2017 – FY 2021, and a resulting growth rate of 5.0% during the full forecast period.¹⁸ The FY 2013 cyclical deficit reflects the difference between the tax revenue estimate from the Governor’s FY 2013 budget proposal of \$22.104 B and the FY 2013 estimate of \$23.136 B¹⁹ associated with the tax revenue trend-line calculated using the formula described in above (see footnote 17) and noted in Table 3.

1F. Related Policy Benchmarks

Limitation on Use of Capital Gains Tax Revenue

Legislation filed by Governor Patrick to limit the use of tax revenue from capital gains to \$1 B for budgetary purposes was enacted with the FY 2011 budget.²⁰ The goal of this policy was to limit spending from a volatile revenue source that represents approximately 5% of tax revenue on average but can account for as much as 50% of the cyclical volatility to trend in tax revenue (See Figure 3). The difference between the \$2.1 B of tax revenue from capital gains received in FY 2008²¹ compared to a \$1.0 B threshold, for example, would explain the majority of the estimated excess revenue shown in Figure 2.

This policy was designed to protect against over-spending during periods when the economy is operating above a sustainable level and also provides a source of discipline during current economic conditions. The FY 2013 budget, for example, assumes \$1.1 B in tax revenue from capital gains and deposits of \$95 M into the Stabilization Fund and \$5 M into the State Retiree Benefits Trust Fund to address OPEB liabilities as required by the legislation.

A & F recommends that the \$1 B threshold be reviewed as part of the FY 2016 budget development and every four years thereafter to account for the impact of inflation and economic growth since the inception of this policy. The need for such an adjustment mechanism – based on the growth in nominal US GDP or similar measures - was identified in the Governor’s FY 2011 budget brief and will ensure that this important fiscal policy measure continues to serve its intended purpose in the future.

¹⁸ The Debt Affordability Analysis uses a more conservative growth assumption of 3% for all revenue based on a 10 year historical CAGR.

¹⁹ Note that Governor Patrick’s FY 2013 budget assumes total tax revenue of \$22.104 B, based on the consensus revenue estimate of \$21.950 B plus the impact of proposed revenue initiatives.

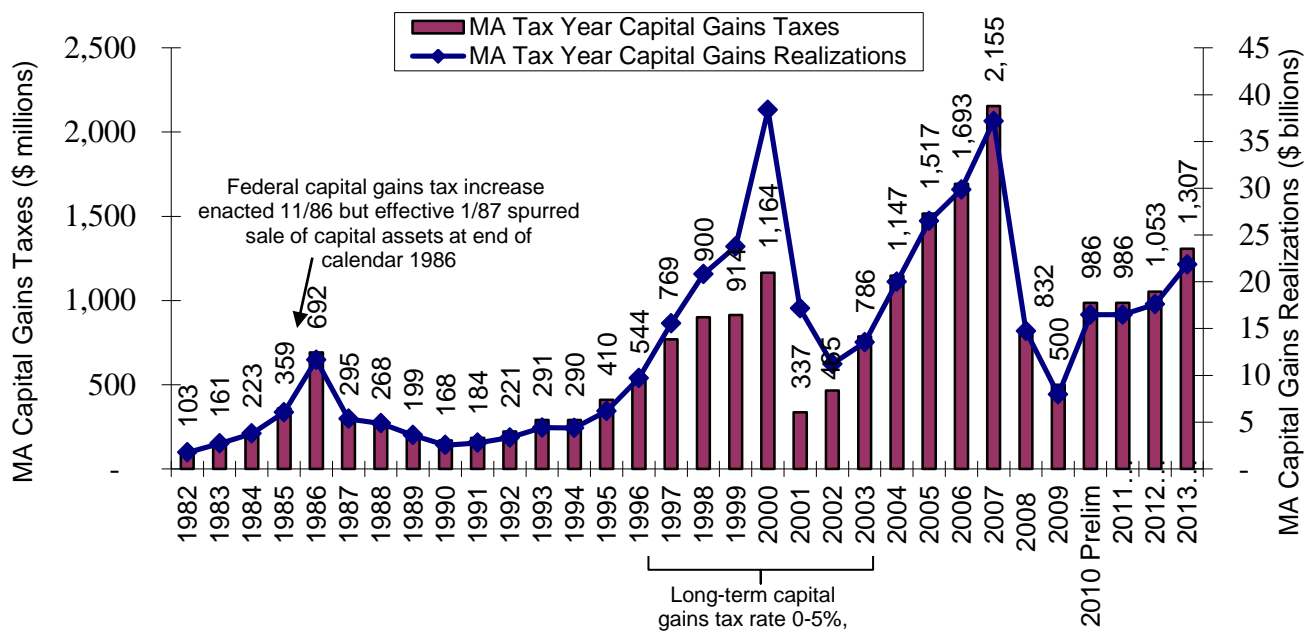
²⁰ G.L. c. 29, sec. 5G, inserted by Section 19 of Chapter 131 of the Acts of 2010

²¹ Represents fiscal year receipts. Figure 3 is on a calendar year basis.

Figure 3

Source: Department of Revenue Consensus Revenue Handbook – Calendar Year Basis

Massachusetts Capital Gains Realizations and Taxes



One-Time Settlements

Legislation filed by Governor Patrick to deposit any one-time settlements in excess of \$10 M into the Stabilization Fund was enacted with the FY 2011 budget.²² As of month-end February 2012, \$202.5 M of such settlements had been deposited into the fund.²³ This policy further reflects the discipline that has allowed the Commonwealth to accumulate one of the highest Stabilization Fund balances in the country since the end of the recession.

Temporary Holding Fund

The Temporary Holding Fund was established in 2003 to ensure that excess revenue over a calculated “permissible amount” is not available for spending. The permissible amount is calculated quarterly and is equal to the amount of tax revenue received in the prior year, increased by inflation plus two percentage points. At the end of each quarter, the Commissioner of Revenue must calculate cumulative permissible tax revenue and the Comptroller must then transfer tax revenue in excess of that amount from the General Fund to a Temporary Holding Fund. If actual tax revenue collections fall short of the permissible limit, the difference flows back into the General Fund. At the end of each fiscal year, tax revenue in excess of the permissible amount is held in the Temporary Holding Fund pending disposition by the Comptroller. The Comptroller is required to reimburse the Commonwealth Stabilization Fund for any amounts

²² G.L. c. 29, sec. 2H, as amended by Section 37 of Chapter 68 of the Acts of 2011

²³ Note that some levels of one-time settlement are typically assumed in the consensus tax revenue forecast.

expended from the Stabilization Fund during the fiscal year and any remaining excess revenue must be transferred back to the General Fund for inclusion in consolidated net surplus.

1G. Assumptions for Changes in Tax Law

The long-term tax revenue projections assume the impact of all changes in tax law that were projected for the Governor's FY 2013 budget proposal but do not assume any future changes. Notably, the FY 2013 consensus tax revenue forecast includes the annualized impact of the reduction in the personal income tax rate from 5.30% to 5.25%.

1H. Development of Macroeconomic Assumptions for the Five-Year Model

The long-term tax revenue forecasts performed by outside economists provides certain macroeconomic indicators that have been applied by A & F to develop "Base Case" economic assumptions for the five-year model. These assumptions are summarized in Table 4 and referenced in the discussions of revenue and spending assumptions in Sections 2B and 2C. Note that these assumptions were based on the forecast used for the Governor's FY 2013 budget proposal and will be updated periodically to reflect changes in economic conditions (e.g. more recent estimates indicate lower rates of inflation in the near-term).

Table 4
Long-Term Macroeconomic Assumptions: Base Case Scenario

<u>State Economy</u>	
Real Growth ¹	2.1%
Inflation ²	2.3%
Massachusetts Gross State Product (MA GSP)	4.4%
MEMO: Inflation + Population Growth	2.8%
<u>Per Capita</u>	
Real Growth	1.6%
Nominal Growth	3.9%
Excess Health Care Cost Growth ³	1.8%
¹ Comprised of .5% population growth and 1.6% productivity growth per capita. A & F estimate based on long - term projections from outside economists ² A & F and OTPA estimates based on FY 2014 - FY 2021 US Urban CPI (Economy.com), US Urban CPI (Global Insight), MA Urban CPI for Boston (Economy.com), MA Entire State CPI (Global Insight), and Boston Urban CPI (New England Economic Partnership) ³ A & F estimate based on historical trends and informed by CBO analysis. Congressional Budget Office. "CBO's 2011 Long-Term Budget Outlook." Chapter 3. June 2011.	

Section 2 – Sustainable Spending Growth and Five-Year Model Results

2A. Summary of Results

The policy benchmark for sustainable spending growth is informed by the long-term tax revenue forecast described in Section 1E and evaluated using a five-year model informed by GFOA recommendations. The 4.0% benchmark is based on the long-term weighted average of projected growth across all revenue sources, net of federal reimbursements (Table 5).²⁴ This benchmark is largely driven by the long-term tax revenue growth rate of 4.4% discussed in Section 1E and is reduced by lower rates of growth for Departmental Revenue and Transfers From Off Budget Trust Funds (see Section 2B below). Note that the long-term policy benchmark for spending growth may change with updates to underlying assumptions and that spending may exceed the benchmark in certain years - particularly during periods of economic recovery - provided that structural balance is maintained over the five-year forecast period.

Table 5
FY 2013 Composition and Growth of Net Revenue / Other Cash Inflows

	Revenue / Other Cash Inflows \$ M	Net of Federal Reimbursements		
		\$ M	% of Total	Long-Term Growth
Tax Revenue	\$22,104	\$22,104	82%	4.4%
Federal Reimbursements	8,015	0	-	-
Departmental Revenue	3,211	3,211	12%	2.0%
Transfers From Off Budget Trust Funds	1,765	1,765	7%	2.4%
Total	\$35,095 ²	\$27,080	100%	4.0%
1 Growth Rate in FY 2017 and future years assuming the economy is operating in a "steady state" at full capacity (full employment)				
2 The amount of Revenue available for on budget spending after deducting the tax revenue amounts dedicated to the MBTA, the SBA, and the pension fund appropriation is \$32.057B.				

The Governor's FY 2013 budget proposal projects spending growth within this benchmark at 3.4% based on projected spending net of federal reimbursements of \$26,513 M in FY 2012 and \$27,385 in FY 2013.²⁵ (Table 6) Structural balance is also maintained for the five-year model results in FY 2014 and FY 2015 as higher spending growth of 4.5% and 4.9% is offset by strong tax revenue growth of 6.0% annually during an expected economic recovery.

²⁴ See page 3 for a detailed explanation of the rationale for evaluating revenue and spending net of federal reimbursements.

²⁵ Projected net spending of \$27,385 M less net use of \$305 M in Stabilization Funds reconciles with \$27,080 M in Table 5.

Table 6

FY 2013 Spending and Recent / Projected Spending Growth (Based on Governor's Proposed Budget)			
	Total (\$Ms) FY13	Annualized Spending Growth	
		FY 08-12*	FY 12*-13
Budgetary			
MassHealth	\$ 10,951	6.1%	5.0%
Group Insurance Commission	1,231	9.9%	-0.9%
Health and Human Services	4,907	0.2%	1.5%
Chapter 70	4,136	1.7%	3.6%
Education	1,968	-2.1%	1.0%
Debt Service	2,437	3.2%	7.9%
Public Safety	1,070	-1.6%	1.8%
Local Aid	860	-8.4%	-7.0%
Remaining Budgetary Spending	2,647	-3.6%	0.0%
Sub-Total	30,207	1.9%	3.0%
Dedicated Revenue	1,539	1.3%	5.2%
Sub-Total On Budget	31,745		
Transfers to Off Budget Trust Funds			
Pension	1,552	1.4%	5.0%
Health Care Related	1,755	-1.4%	4.3%
All Other	348	-2.4%	-4.5%
Transfers to Off Budget Trust Funds	3,655	-0.4%	3.7%
Total Spending	35,400	1.6%	3.2%
Less: Federal Reimbursements	(8,015)	5.0%	2.4%
Total Net of Federal Reimbursements	\$ 27,385	0.7%	3.4%
*FY 2012 based on estimates as of January, 2012			

The five-year model results discussed in Section 2D, however, indicate that structural deficits could occur in FY 2016 and FY 2017, as a result of continued long-term spending growth of 5.0% driven by the excess growth in health care spending discussed in Section 2C. In the absence of other solutions, the difference between recurring revenue and recurring spending would result in annual structural deficits of over \$300 M by FY 2017 and deplete 75% of the Stabilization Fund by the end of the five-year rolling forecast period.

Scenario analysis indicates that excess health care cost growth would need to be eliminated in order to maintain structural balance over time. This reduction, however, would only allow for maintenance level spending for existing government programs and would not allow for increased investments for transportation, education, restoration of past budget cuts or other purposes.

These projections underscore the need to build on the Patrick-Murray Administration's recent success and ongoing efforts to contain growth in health care costs. The budgetary impact of these efforts are reflected by projected spending growth in FY 2012 at MassHealth of less than 3%, a projected 10% reduction in Commonwealth Care premiums for low income individuals over FY 2012 and FY2013, and an estimated growth of only 1.43% in FY 2013 for employee

health insurance premiums at the Group Insurance Commission (GIC); the lowest increase in over 10 years. This level of cost containment, however, is not expected to continue without system reform. See the discussion of health care cost growth in Section 2C.

2B. Five-Year Model

The components of the five-year model include: (1) Macroeconomic Assumptions; (2) projections for Revenue and Other Cash Inflows; (3) projections for Spending and Other Cash Outflows; and (4) Scenario Analysis. The structure of the model follows GASB's preliminary view on financial projections with respect to forecasting inflows, outflows, and debt service. The ability to perform scenario analysis supports a policy driven process, as prescribed by the GFOA.

Macroeconomic Assumptions

The five-year model applies consistent assumptions from Table 4 as building blocks for revenue and spending projections. Inflation plus projected state population growth, which total 2.8%, are used as a check for reasonableness against the standard maintenance assumption for budgetary spending of 3.0%. These assumptions plus the estimate of 1.6% real growth per capita are used in the development of a long-term estimate of 4.4% annual growth in Massachusetts Gross State Product (MA GSP). MA GSP is also used as the foundation for projected rates of health care cost growth as discussed in Section 2C.

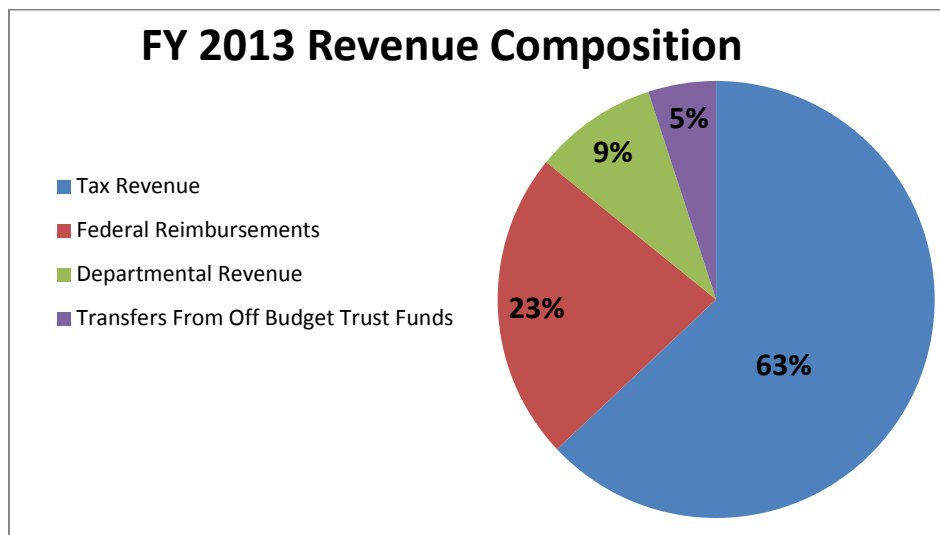
The 1.6% assumption for real growth per capita, based on the forecasts of outside economists, is generally consistent with CBO projections for growth in the total US economy²⁶ but may be lower than historical rates of per capita growth in the Commonwealth. Section 4 - Areas for Further Study identifies the benefit of performing additional analysis of the impacts on the state's projected rate of growth from an aging workforce, housing supply, and economic development initiatives; as well as the potential impact of certain investments in transportation, and education.

Revenue and other Cash Inflows

Revenue and other cash inflows include tax revenue, federal reimbursements, departmental revenue, and transfers from off budget trust funds. Tax revenue of \$22.1 B accounts for 63% of all inflows (Figure 4) in the Governor's FY 2013 Budget and is projected to grow by 4.4% - 6.0% annually between FY 2014 and FY 2016 as discussed in Section 1D.

²⁶ Congressional Budget Office. "CBO's 2011 Long-Term Budget Outlook." June 2011.

Figure 4



Federal reimbursements of \$8 B make up 23% of projected FY 2013 revenue. Over 60% of these inflows, which are projected to grow at 6.6% over the long-term based on related spending projections, are associated with Medicaid reimbursements to MassHealth. Table 7 shows the ratio of federal reimbursements and budgetary spending for MassHealth over the last five years. Based on this analysis, reimbursements are projected at 46.2 % of MassHealth spending between FY 2014- FY 2017 in the five-year model. Note that these projections do not take account for increased federal reimbursements from National Health Care Reform, which is discussed in Section 4 - Areas for Further Study.

Table 7

	MassHealth Federal Reimbursements		
	% of Spending	Reimbursement	Spending
FY 2009	46.8%	3,994	8,536
FY 2010	45.8%	4,250	9,287
FY 2011	46.0%	4,709	10,237
FY 2012	47.2%	4,926	10,433
FY 2013	45.3%	4,961	10,951
Average	46.2%		

Federal Reimbursements for MassHealth include reimbursements for Standard, Essential, SCHIP, and other program spending. The five-year model uses the average ratio of MassHealth federal reimbursement to spending to project future MassHealth reimbursement levels based on the average ratio of 46.2% during FY 2009 – FY 2013. Note that the Enhanced Federal Reimbursements for MassHealth that were funded under the American Recovery & Reinvestment Act are excluded from historical figures.

The majority of other federal reimbursements are related to health and human services programs. Revenue from these sources is projected to grow with associated spending, with the exception of Temporary Assistance for Needy Families (TANF) block grants, which are assumed to be flat based on current federal policy. Table 8 shows the ratio of federal reimbursements and projected spending by government area based on the Governor's FY 2013 budget proposal, as well as the long-term assumptions for this ratio as applied in the five-year model.

Table 8

Ratio of Federal Reimbursements to On Budget Spending by Government Area

Government Area	2013 Federal Reimbursements (\$Ms)	FY 2013 Spending (\$Ms)	FY 2013 Ratio	Long-Term Ratio
MassHealth	\$ 4,961	\$ 10,951	45.3%	46.2%
Other Health & Human Services	2,042	4,907	41.6%	41.6%
CommCare	412	737	55.9%	55.9%
Medical Assistance Trust Fund	274	394	69.5%	69.5%
Education*	196	Fixed Amount (\$ M): \$196		
All Other	130	Fixed Amount (\$ M): \$130		
Total	\$ 8,015			
*Education reimbursements have been between \$192 M and \$205 M between FY08 and Projected FY 2012. They are projected to be \$196 M for FY 2013				

Departmental revenues comprise 9% of estimated FY 2013 revenue and are generated across multiple agencies in state government (See Figure 7). The significant majority of departmental revenues are associated with three agencies: Health and Human Services (29%), A & F (23%) - including chargebacks from non-state entities for use of the Group Insurance Commission (GIC) - and Transportation (17%) including registration and vehicle title fees generated by the Registry of Motor Vehicles. The total projected growth rate of 2.0% for FY 2014 – FY 2017, as shown in Figure 6, was estimated by A & F based on 3, 5, 7, and 10 year compounded annual growth rates, excluding the impact on growth of reimbursements from two sources: non-state entities participating in the GIC and health care drug rebates from the federal government.²⁷

The impact of growth in GIC reimbursements, which are expected to increase as a result of Municipal Health Care Reform,²⁸ was excluded from the historical growth rate calculation given that these revenues will be directly offset by budgetary spending²⁹ and the uncertainty of projecting the rate at which municipalities will adopt the GIC.³⁰ The impact of growth in health

²⁷ Drug rebates are determined by a federal formula. Recent growth has been impacted by increased spending in pharmacy related healthcare. The Patient Protection and Affordable Care Act also allowed states to claim rebates under managed care capitation payments which has also contributed to a significant growth in recent years.

²⁸ Chapter 69 of the Acts of 2011

²⁹ Note that the spending growth projections for GIC implicitly assume a 0.5% rate of enrollment growth, which is not intended to account for significant increases resulting from municipal health care reform. Estimates for this additional growth will be incorporated into future version of the Long Term Fiscal Policy Framework.

³⁰ These projections are expected to be included going forward in concert with the efforts of the newly established Caseload Forecasting Office. See Section 4 - Areas for Further Study.

care drug rebates, which have increased significantly in recent years as a result of National Health Care Reform, were excluded given the need for further analysis to address uncertainty in projecting these revenues going forward (See Figure 6). Revenues from these sources are included in the FY 2013 estimate based on the Governor's budget proposal and for purposes of the five-year model, are assumed to grow at the rate applied to all departmental revenues for FY 2014 – FY 2017.

Figure 5

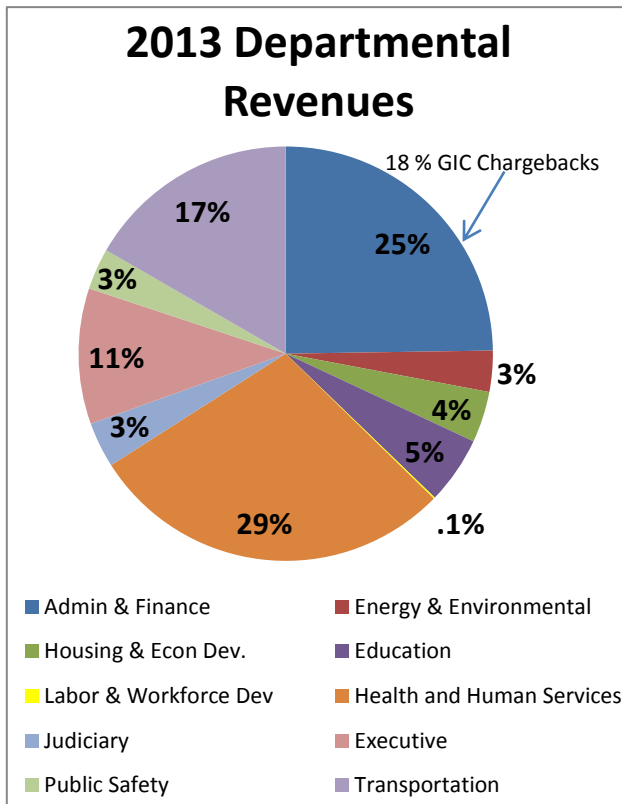
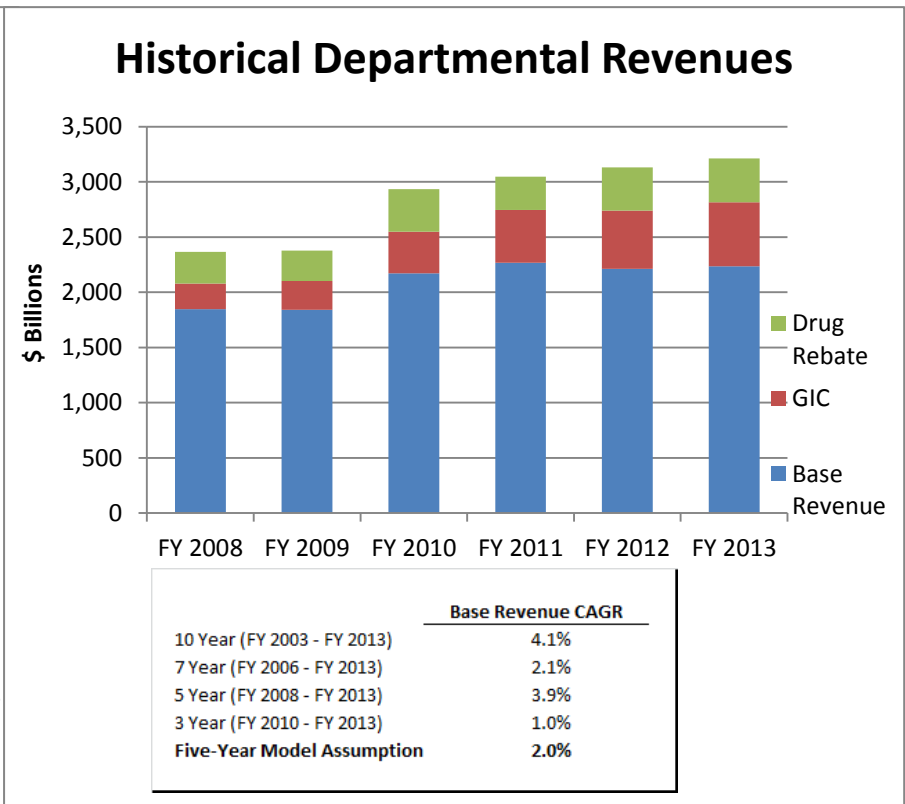


Figure 6



Transfers from off budget trust funds of \$1.7B in the Governor's FY 2013 Budget include revenues from the lottery (\$1.013 B), the Master Settlement Agreement (or "tobacco proceeds") (\$276 M), fringe recoveries to the general fund (\$296 M) and unclaimed property recoveries (\$77 M). Lottery revenues are projected to grow at 2% annually based on a long-term historical trend analysis provided by the Office of the State Comptroller. Master Settlement Agreement proceeds refer to the annual payments made by participating tobacco manufacturers, stemming from a settlement agreement between the tobacco companies, the Massachusetts Attorney General, and 45 other states. The assumption of 0% growth in tobacco proceeds is based on the expectation that reduced cigarette usage and other factors that may lower future payments, based on the formula included in the settlement agreement, will offset the adjustments for inflation and other variables that would otherwise increase the amounts paid to the states.

Fringe recoveries represent the state's share of fringe benefit costs – health insurance, pensions and terminal leave salaries – on all Federal grant and other non-budgetary accounts. The assessment of fringe benefits on Federal funds is mandated by section 6B of Chapter 29 of the

Massachusetts General Laws. Section 5D of the same law extends that assessment to all other funds of the Commonwealth except the General Fund. Fringe recoveries are projected to grow by approximately 6.0% based on a methodology provided by the Office of the State Comptroller using spending growth rates for the Group Insurance Commission and pensions. Total growth for off budget trust funds is projected at 2.3-2.4% annually during FY 2015 – FY 2017 based on these assumptions. See Sections 1A, 1B, and 1C of the Governor's FY 2013 budget proposal for additional information on revenue and other inflows here:

http://www.mass.gov/bb/h1/fy13h1/exec_13/hbuddevchall.htm.

Spending/Cash Outflows

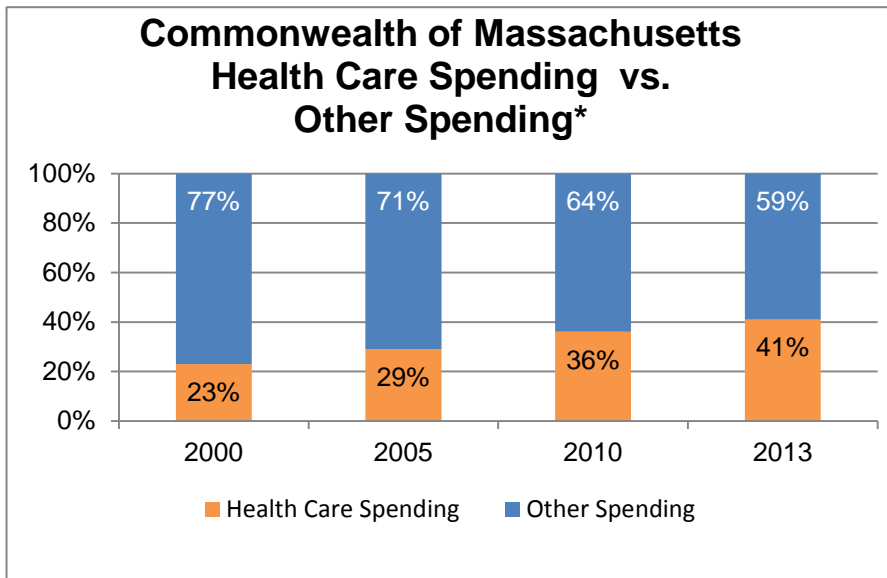
Spending and other cash outflows are comprised of budgetary spending (85.4%), dedicated revenue (4.3%), and transfers to off budget trust funds (10.3%). The Governor's FY 2013 budget proposal includes budgetary spending of \$30.395 B in FY 2013 that is projected to grow by 5.2% to 5.3% annually, driven primarily by maintenance spending of 3.0% for most programs and a blended average of 8.0% for health care related spending as discussed in Section 2C. The detailed spending growth assumptions are included in Table 9. These assumptions were informed by recent trends but also rely heavily on forward looking indicators given the impact of the recession on government budgets over the past several years.

Dedicated revenues account for \$1.54 B in spending and include mandated allocations to the Massachusetts Bay Transit Authority (MBTA) and the School Building Authority (SBA), both of which are tied to the sales tax. Transfers to off budget trust funds are projected to be \$3.66 B and include deposits into the state pension fund, State Retiree Benefits Trust Fund, Commonwealth Care Trust Fund, Medical Assistance Trust Fund and Commonwealth Transportation Fund. They are projected to grow by between 5.3% and 5.8% during FY 2014 – FY 2017, driven largely by the payments required by the current pension funding schedule and assumptions for or health care related spending. See sections 2B, 2D, 2E and 3 of the Governor's FY 2013 budget proposal for additional details on spending and other cash outflows.

2C. Health Care Spending Growth

Health care spending growth is a focal point of the five-year model given that health care's share of on-budget spending has increased from 23% to 41% between FY 2000 and projected FY 2013. This increase is the result of high enrollment growth in the federally subsidized Medicaid programs overseen by MassHealth and the Health Connector Authority (HCA) as well as excess health care cost growth. Enrollment growth in MassHealth has been especially rapid with the increased demand for safety net programs since the onset of the recession. Between FY 2008 and FY 2012, annual enrollment growth at MassHealth exceeded 4%. Excess cost growth is defined as the extent to which health care spending per capita is growing faster than the overall economy. Excess growth for all health care expenditures has ranged from 1.5% to 2.0% annually in the United States over the past 20 to 35 years (See Figure 8).

Figure 7



* Based on Governor's FY 2013 Budget proposal

Figure 8³¹

Excess Cost Growth in Spending for Health Care

(Percentage points)

	Medicare	Medicaid	All Other	Total
1975 to 2007	2.4	2.0	1.9	2.0
1980 to 2007	2.2	1.7	2.0	2.0
1985 to 2007	1.4	1.3	1.9	1.7
1990 to 2007	1.6	1.1	1.5	1.5

Source: Congressional Budget Office.

Note: Excess cost growth refers to the extent to which the annual growth rate of Medicare or Medicaid spending per beneficiary or of all other health care spending per capita—adjusted for demographic characteristics of the relevant populations—exceeded the annual growth rate of nominal gross domestic product per capita, on average.

The increased spending on health care in Massachusetts is not unique to government. Spending on health care in the state grew by over 7% annually between 2000 and 2010 – twice as fast as the rate of growth in the state economy. Further, experts estimate that there is approximately 30% inefficiency in the health care system, indicating that there may be opportunity to control health care costs growth without sacrificing outcomes.³²

Five-Year Model Assumptions

Health care related spending includes benefits for state employees and retirees administered by the Group insurance Commission (GIC)³³ as well as federally subsidized programs overseen by MassHealth and the Health Connector Authority (HCA). Health care accounts for approximately 41% of on budget spending and 30% of total spending, net of federal reimbursements. MassHealth represents over 70% of total health care related spending and, along with HCA, is assumed to grow at 8.2% between FY2014 and FY 2017. The assumed growth rate for benefits administered by the GIC is 6.2%.

³¹ Excess Cost Growth Table from Congressional Budget Office. "CBO's 2011 Long-Term Budget Outlook." Chapter 3. June 2011.

³² Delaune, Jules, and Wendy Everett. "Waste and Inefficiency in the U.S. Health Care System. Clinical Care: A Comprehensive Analysis in Support of System-wide Improvements. NEHI. February 2008
NEHI. "How Many More Studies Will It Take? A Collection of Evidence That Our Health Care System Can Do Better." February 2008

Pear, Robert. "Health Official Takes Parting Shot at 'Waste.'" *New York Times* 3 December 2011

Sutherland, Jason M., Elliot S. Fisher, and Jonathan S. Skinner. "Getting Past Denial – The High Cost of Health Care in the United States." *New England Journal of Medicine* 361 (2009): 1227-1230

³³ Includes payments made for state retirees through the State Retiree Benefits Trust Fund

The health spending growth assumptions are based on estimates of excess cost growth and program specific enrollment projections. Excess cost growth is assumed to be 1.8% annually, informed by recent estimates that total health expenditures per capita in Massachusetts grew at an annualized rate of 5.9% from 1991 to 2009 (see Figure 9). This implies 1.8% excess cost growth based on an estimated per capita economic growth of 4.1% during this time period. The 1.8% excess growth figure is also closely aligned with the CBO's forward looking projection of 1.7%.³⁴

Figure 9: Annual Rate of Increase of Per Capita Health Expenditures by Service in Massachusetts Source: Centers for Medicare and Medicaid Services

	1991-2000	2000-2009	1991-2009
Hospital Care	3.3%	7.3%	5.3%
Physician & Other Professional	5.4%	6.9%	6.2%
Other Personal Health Care	7.0%	6.7%	6.8%
Prescription Drugs	9.4%	6.5%	7.9%
Nursing Home Care	3.5%	4.7%	4.1%
Total	5.0%	6.8%	5.9%

Enrollment growth is estimated to be 0.5% for the Group Insurance Commission, based on annualized growth over the past three years and 2.5% for MassHealth based on historical trends and internal projections.³⁵ The development of the spending growth assumptions for health care is provided in Figure 10 below.

Figure 10: Health Care Spending Growth Assumptions

	Group Insurance Commission ²	MassHealth (and CHA)
Long-Term Growth per Capita ¹	3.9%	3.9%
Excess Health Care Cost Growth	1.8%	1.8%
Enrollment Growth	0.5%	2.5%
Total Spending Growth	6.2%	8.2%

1) Recently proposed legislation estimates this growth rate to be 3.6% in 2012 and 2013.
A&F considers this estimate reasonable given lower rates of inflation and other factors

2) Includes Payments made to retirees through the State Retiree Benefits Trust Fund

³⁴ Congressional Budget Office. "CBO's 2011 Long-Term Budget Outlook." Chapter 3. June 2011.

³⁵ Projected enrollment growth for MassHealth is materially lower than recent trends and projected cost growth is materially higher; both are a reflection of an improving economy.

Table 9: Key Assumptions

5 Year Model Revenue Growth Assumptions - Base Case

Revenue Type:	Growth FY14-17	Comments
Tax Revenue	4.4% - 6.0%	6.0% for FY 2014-2016 and 4.4% thereafter (See Section 1D).
Federal Reimbursements	7.7% - 6.6%	Growth rate tied to spending growth for reimbursable line items (See Section 2B) and is largely driven by MassHealth which accounts for 61% of reimbursements. Growth is lower for scenarios where health care spending growth is assumed to be lower. Estimate based on historical growth rates (See Section 2B).
Departmental Revenues:	2.0%	
Transfers From Off Budget Trust Funds		
Tobacco Settlement	0.0%	Assumes that adjustments for inflation and changes in cigarette usage offset.
Lottery	2.0%	Based on long-term rates of growth
Fringe Recoveries	6.00%	Function of Growth in employee health insurance (GIC) and Pensions
Abandoned Property	0.0%	Assume zero for this unpredictable source of revenue.
Long-Term Blended Growth Net of Federal Reimbursements	4.0%	Based on long-term growth rate of 4.4% for Tax Revenue

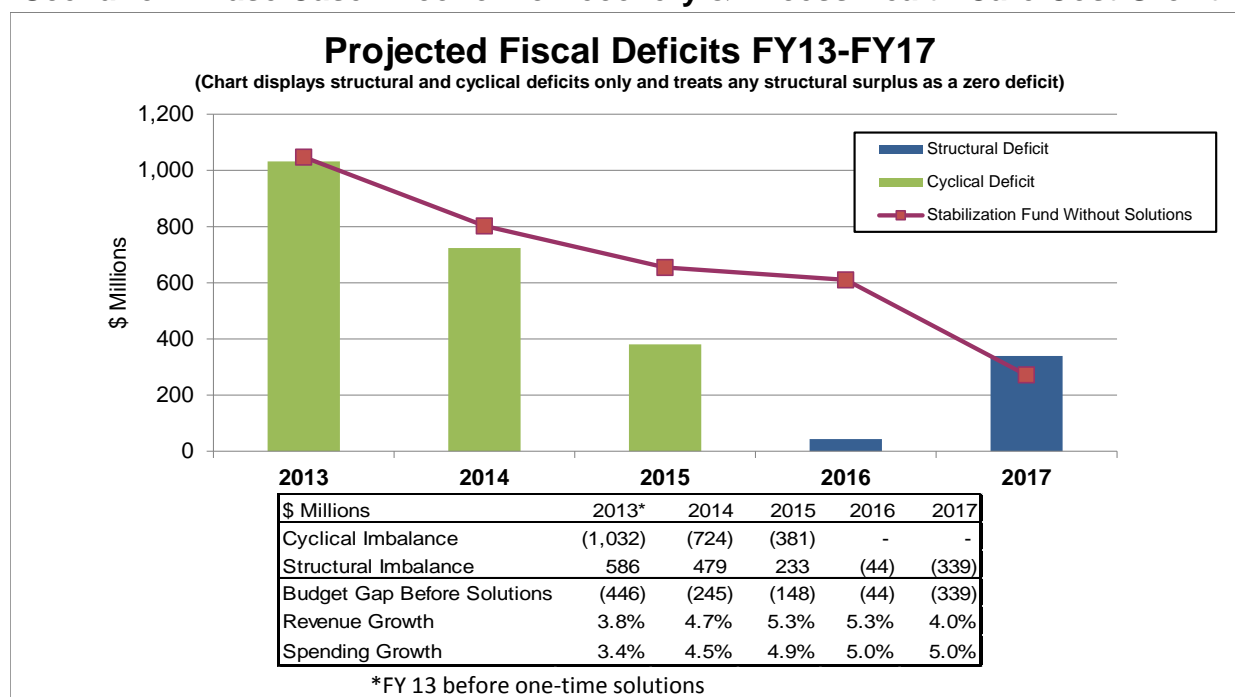
5 Year Model Spending Assumptions - Base Case

Spending Category:	Long-Term Growth	Comments
Budgetary Spending		
MassHealth	8.2%	Includes 3.9% MA GSP per capital plus excess health care cost growth of 1.8% and 2.5% total enrollment growth (See Section 2C).
GIC	6.2%	Includes 3.9% MA GSP per capital plus excess health care cost growth of 2.0% and 0.5% total enrollment growth (See Section 2C).
Health and Human Services	3.0%	Base growth rate. Informed by inflation plus population/workforce growth (2.8%)
Chapter 70	4.0%	Base rate + 1% to reflect higher growth since 2008 (See Section 2B).
Debt Service	4.4%	CAGR over FY13-FY17 based on projections in Debt Affordability Analysis
Remaining Budgetary Spending	3.0%	Base growth rate. Informed by inflation plus population/workforce growth (2.8%)
Transfers to Off Budget Trust Funds		
Pension Funding	5.8%	CAGR over FY13-FY17 based on Pension Funding Schedule
Commonwealth Care	8.2%	See MassHealth
Medical Assistance	3.0%	Base growth rate. Informed by inflation plus population/workforce growth (2.8%)
State Retiree Benefit	6.2%	See GIC
Transportation Fund	3.0%	Base rate for spending. Further analysis required to forecast spending related to the Commonwealth Transportation Fund and Massachusetts Transportation Trust Fund.
Dedicated Revenue		
OPEB Funding	\$27 MM Annually	Increases by \$27 M annually based on phase in of tobacco settlement money
MBTA	4.4% - 6.0%	% of Sales Tax. 6.0% for FY 2014-2016 and 4.4% thereafter (See Section 1D).
SBA	4.4% - 6.0%	% of Sales Tax. 6.0% for FY 2014-2016 and 4.4% thereafter (See Section 1D).
Long-Term Blended Growth Net of Federal Reimbursements	5.0%	(sales tax growth may be lower than total tax revenue growth in future analyses)

2D. Results and Scenario Analysis

The results of the revenue and spending assumptions described in Sections 1E, 2B, 2C and Table 9 are summarized in Figure 10 and provided in more detail in Appendix B as “Scenario 1 – Base Case”. These projections show declining cyclical deficits between FY 2013 and FY 2015 as a result of strong revenue growth, and emerging structural deficits in FY 2016 and FY 2017 as a result of increasing levels and growth in spending (see Figure 11). In the absence of other solutions to reduce growth in health care costs, the difference between recurring levels of revenue and spending would result in annual structural deficits of over \$300 M and deplete 75% of the Stabilization Fund by FY 2017.

Figure 11
Scenario 1: Base Case - Economic Recovery & Excess Health Care Cost Growth



Budget gaps are projected to persist through FY 2014 – FY 2017, despite high revenue growth during the first three years of this period, because the rate of revenue growth is not sufficient to offset the fact that current revenue is \$446 M less than recurring spending as of FY 2013. The depletion of the Stabilization Fund is based on the simplifying assumption, for purposes of this analysis, that these funds are required to offset any budget gap.

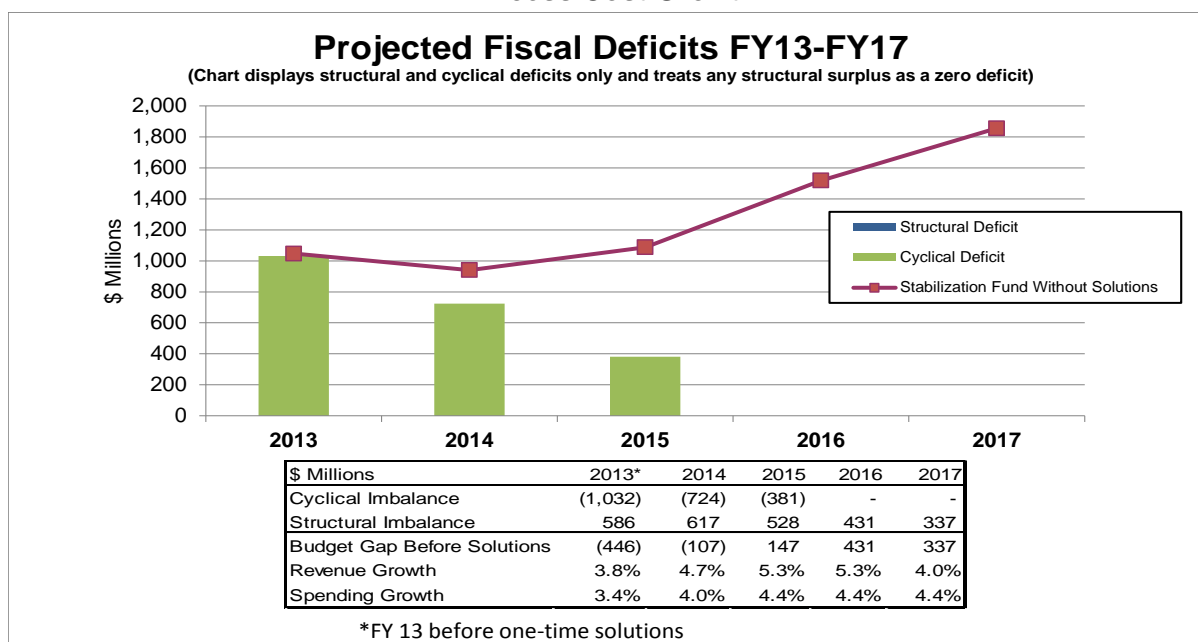
Scenarios 2 and 3 demonstrate the impact of eliminating excess cost growth for health care and the risk associated with lower than projected tax revenue growth, respectively. Scenario 2 indicates that excess health care cost growth would need to be eliminated in order to maintain structural balance over time. This reduction, however, would only allow for maintenance level spending for existing government programs and would not allow for meaningful investment in areas including transportation and education, or restoration of past budget cuts. Scenario 3

highlights the fiscal challenges if the economy does not recover as expected. These scenarios are summarized below and also included in detail in Appendix B.

Scenario 2: Structural Balance – Economic Recovery & No Excess Cost Growth

Scenario 2 assumes growth in tax revenue consistent with the long-term tax revenue forecast but eliminates the 1.8% excess growth in health care costs, which lowers growth in health care spending to 6.2% between FY 2014 – FY 2017. Additional assumptions are consistent with Scenario 1 as reflected in Table 9. Structural balance is maintained throughout the five-year forecast period with the Stabilization Fund increasing to over \$1.8 B by FY 2017. These results, however, still do not allow for meaningful investments or restoration of past budget cuts, and may require policy changes to match revenue and spending growth in the long-term.

Figure 12
Scenario 2: Structural Balance – Economic Recovery & No Excess Cost Growth



Scenario 3: Slow Recovery & Excess Health Care Cost Growth

Scenario 3 assumes annual growth in tax revenue that is equal to the long-term estimate of 4.4% but does not assume the higher levels of growth that would be consistent with a strong economic recovery. Health care cost growth assumptions are consistent with Scenario 1, resulting in 8.0% annual growth in health care spending between FY 2014 – FY 2017. The analysis projects budget gaps of \$500 M - \$1.5 B and a deficit in the Stabilization Fund of over \$3 B by FY 2017. This deficit represents the cumulative total of budget cuts that would be needed to maintain budget balance during the five-year forecast period.

See Appendix B for details.

Section 3 – Disciplined Management of Long-Term Liabilities

Overview

The Administration's policy goal for long-term liabilities is to implement a comprehensive plan to manage long-term debt and address unfunded retirement liabilities. The management of Commonwealth debt is governed by the state's Debt Affordability Analysis, which can be found here: http://www.mass.gov/bb/cap/fy2009/dnld/fy12capplan_a.pdf. Unfunded pension liabilities are addressed through adherence to a mandated funding schedule, best practices in benefit design, and a demonstrated commitment to pension reform to ensure system sustainability. The Commonwealth has also taken measures to address the unfunded liabilities associated with OPEB, which are estimated to be over \$16 B for the state and over \$25 B for municipalities. Additional policy measures to address OPEB liabilities, however, will be required to achieve the Long Term Fiscal Policy Framework goal to establish a comprehensive plan to manage long-term liabilities. The Administration is also evaluating measures to evaluate total long-term liabilities relative to the state economy as discussed in Section 4 – Areas for Further Study.

Pension Liabilities

The Commonwealth's pension funding schedule is based on a statute that requires full funding by FY 2040 and triennial updates to the funding schedule.³⁶ The current schedule was enacted as part of the FY 2012 Budget.³⁷ The enabling legislation also included a provision that requires minimal contribution amounts through FY 2017, in order to prevent the use of asset gains to lower future appropriations. For a more detailed review of funding practices, see the PERAC 1/1/11 Actuarial Valuation (<http://www.mass.gov/perac/pubdir/commvalreport.htm>) and page A-11 of the latest Commonwealth Information Statement.

The Commonwealth has demonstrated a commitment to pension funding best practices while protecting benefits and improving the system through pension reform legislation. Most public employees in Massachusetts contribute 10% - 11% of their salary for future pension benefits, one of the highest contribution rates in the nation.³⁸ The state, moreover, has made steady contributions (See Table 10) to the system at increasing levels in 17 of the last 20 years. Best practices followed by the Commonwealth include excluding overtime from pension calculations, limitations on cost of living adjustments, and a cap on benefits equal to 80% of compensation. The Administration has also been persistent in its pension reform efforts including the most recent legislation that is summarized in Table 11. The impact of this legislation is estimated to save state and local retirement systems in the Commonwealth more than \$5 B over 30 years.

³⁶ G.L. c. 32, sec. 22C

³⁷ Acts of 2011, c. 68 sec. 46. Letter filed with the Triennial Funding Schedule by Jay Gonzalez. Executive Office of Administration & Finance. January 18, 2011.

³⁸ "The Revenue Demands of Public Employee Pension Promises", Robert Novy-Marx and Joshua D. Rauh, June 2011

The PEW Center on the States. "The Widening Gap: The Great Recession's Impact on State Pension and Retiree Health Care Costs." April 2011

Table 10
Historical Pension Funding Amounts

<u>Fiscal Year</u>	<u>Funding (\$ 000)</u>
1992	724,000
1993	778,000
1994	844,000
1995	959,926
1996	1,006,744
1997	1,061,321
1998	933,392
1999	945,340
2000	960,024
2001	1,022,050
2002	778,408
2003	796,758
2004	832,335
2005	1,216,936
2006	1,274,675
2007	1,335,176
2008	1,398,573
2009	1,314,396
2010	1,376,619
2011	1,441,810
2012	1,478,000
2013	1,552,000

Table 11
2011 Pension Reform³⁹

- Raises target retirement ages by two years, from 65 to 67 for most employees
 - ✓ Aligns with social security
- Raises minimum retirement age to 60 for most employees
 - ✓ Aligns with range of benefits available to taxpayers for 401(k) at 59 ½ and social security at 62
- Eliminates subsidies for early retirement
 - ✓ Aligns with social security
- Savings of \$5 B+ over 30 years for state and local systems
- Reforms measures to promote fairness and further address abuse:
 - ✓ Eliminates Double Dipping – eliminates the right to receive a pension while receiving compensation or service as an elected official in the same position unless one year has passed from the end of the previous elected term.
 - ✓ Introduces anti-spiking rule – limits the annual increase in pensionable earnings to no more than 10 percent of the average pensionable earnings over the last two years.
 - ✓ Pro-Rates Benefits – retirement allowance for new employees who serve in more than one group will be pro-rated, taking into account the number of years of service in each group.
- Implements good governance initiatives to reform the operation of retirement boards by requiring training, filing of statements of financial interests and better regulation of procurements, stipends, and other management provisions.
- Improves equity within the system - benefit changes have the smallest impact on career employees with 30+ years of service, as these employees currently pay for the highest share of their pension benefit.

³⁹ Chapter 176 of the Acts of 2011.

These measures will help to ensure that the Commonwealth can maintain a pension system that is fair and sustainable. Additional research to further this effort was also included in the 2011 Pension Reform Act signed by Governor Patrick.⁴⁰

OPEB and Unfunded Liabilities for Retiree Health Care Benefits

The Administration has taken initial steps to address the challenge of unfunded retiree health care liabilities but recognizes the need for additional policy measures. The Commonwealth pays 80% of health insurance premium costs for new retirees with 10 or more years of public service. Local governments pay a varying share of retiree health insurance premium costs, but on average pay an estimated 75% of cost.⁴¹ The average cost of retiree health benefits for public employees in Massachusetts is among the highest of the 50 states⁴² and more generous than the benefit available to 80-90% of private sector employees in the Commonwealth.⁴³ The present value of the unfunded OPEB liability for state and local public employees in Massachusetts is estimated to be over \$40 B, which represents approximately \$100 B in future payments.

The Patrick-Murray Administration has taken a number of steps to address this challenge including: increasing the share of health insurance costs paid by employees and retirees; establishing an investment trust for the purpose of funding future retiree health care liabilities; the commitment beginning in FY 2013 to phase-in proceeds from tobacco settlements to provide resources for the trust (estimate of \$27.6 M in FY 2013); allocating 5% of capital gains tax revenue over \$1 B to the trust; and the recent pension reform legislation which raises retirement ages and as a result, is projected to lower retiree health care costs years by an estimated \$2 B for the state and municipalities in the Commonwealth over the next 30 years.

These efforts, however, will only address a small part of the challenge. Adequately funding current liabilities would require budget reductions for state government that are approximately equal to the total amount of local aid in the FY 2013 budget. This is based on the difference of \$899 M between the Annual Required Contribution (ARC) of \$1.296 B estimated for the Commonwealth based on the 1/1/11 OPEB valuation⁴⁴ less a \$397 M appropriation for retiree benefits made in FY11, as compared to a proposed \$860 M appropriation for local aid in the Governor's FY 2013 budget proposal. For municipalities, it could require increasing personal property taxes significantly for the cities in the Commonwealth that already face the most difficult fiscal challenges among municipalities in the state.⁴⁵

⁴⁰ Section 62 of Chapter 176 of the Acts of 2011.

⁴¹ The Massachusetts Taxpayer Foundation. "The Crushing Burden of Municipal Retiree Health Care Liabilities." January 13 2012.

⁴² Munnell, Alicia H., Jean-Pierre Aubry, Josh Hurwitz, and Laura Quinby. "Comparing Compensation: State-Local Versus Private Sector Workers." Center for Retirement Research at Boston College. Number 20, September 2011.

⁴³ 2009 Division of Health Care Finance and Policy Annual Survey

⁴⁴ Commonwealth of Massachusetts: Postemployment Benefits Other Than Pensions Actuarial Valuation see: <http://www.mass.gov/osc/docs/reports-audits/opeb/2011-opeb-valuation-final.pdf>

⁴⁵ Massachusetts Taxpayers Foundation. "The Crushing Burden of Municipal Retiree Health Care Liabilities." January 2012. (See Table 5 in the MTF publication).

Measures that other state and local governments have taken include: pro-rating benefits based on years of service (similar to what the Commonwealth already does for pensions); requiring modest employee contributions for retiree health; limiting coverage for pre-Medicare insurance; and including “continuing service” requirements. These potential solutions and others are being reviewed as part of an OPEB Commission that was mandated as part of the pension reform legislation signed into law by Governor Patrick in November 2011.

Section 4 –Areas for Further Study

As a part of the semi-annual update process, the Administration will reassess the adequacy of the Long Term Fiscal Policy Framework as a whole and identify additional measures and analyses to better support long-term fiscal planning. Areas for Further Study may include:

Additional Benchmarks for Structural Balance and One-time Resources:

A & F and the Office of Tax Policy Analysis are working with outside economists to develop policies and benchmarks, as described in Section 1F to: (1) enhance the analysis of cyclical imbalance through the use of confidence intervals and other statistical measures; (2) ensure that there are effective policies in place to maintain structural balance during periods of cyclical surplus; (3) ration and prioritize the use of one-time resources across a multi-year period of cyclical deficit, including the use of targets for the minimum Stabilization Fund balance under different economic conditions; and (4) expand the analysis of cyclical imbalance beyond tax revenue to include the relationship between underlying economic indicators and other factors that impact the state budget, including caseload levels in safety net programs.

Expanded Use of Long-Term Economic Projections:

The long-term tax revenue forecasts provided by outside economists utilize certain assumptions with regard to workforce growth, productivity, population growth, and demographics in Massachusetts. Additional analyses of these projections could be used to improve the five-year model and to inform policy decisions across state government. The projections for Massachusetts economic growth, for example, are lower than historical trends. This result may warrant additional study of the impacts on the state’s projected rate of growth from an aging workforce, housing supply, and economic development initiatives.⁴⁶ An analysis of the economic benefits of potential investments in government areas including transportation and education may also be warranted.

Improved Caseload Forecasting:

The newly formed Caseload Forecasting Office⁴⁷ is working with agencies, members of the legislature and outside experts to improve transparency and accuracy of caseload projections. This effort will improve the five-year model projections by providing more accurate assumptions for long-term caseload growth for certain programs.

⁴⁶ See Massachusetts Foundation for Growth for additional information on these topics.

<http://www.massgrowth.net/>

⁴⁷ See M.G.L. Chapter 7 Section 4R for details of the newly formed Caseload Forecasting Office

Additional Analysis of Retirement Benefits:

The Pension Reform Act of 2011 included mandates to study several areas related to retirement benefits, including the OPEB Commission discussed in Section 3. The legislation also establishes a commission to study pension classification, a commission to study disability benefits, and a requirement that A & F perform a comprehensive study of the costs and benefits of the current pension system. These studies will further the Administration's efforts to manage unfunded retirement liabilities and to preserve benefits necessary to attract and retain high quality public employees.

Comprehensive Evaluation of Long-Term Liabilities:

A & F has begun to monitor long-term liabilities as a percentage of state GSP including the liability categories – debt, pension, and OPEB – that were identified for initial evaluation by GASB. The Administration may consider policy benchmarks using this ratio and/or inclusion of additional liabilities in the calculations, such as deferred maintenance.

Application of the Five-Year Model for Policy Impact Analysis:

The five-year model maybe applied as a framework to perform fiscal impact analysis of individual policy and program initiatives. The Center on Budget and Policy Priorities, for example, recommends using “pay-as-you-go” (PAYGO) principles to evaluate the revenue and cost impacts of proposed policies over a 5-year period to ensure that new policies do not deplete resources for existing services.⁴⁸ The five-year model in combination with PAYGO may inform policy impact analysis that is consistent with the policy goals of maintaining structural balance and achieving sustainable spending growth.

Analysis of Federal Government Dependencies:

The five-year model does not account for the potential impact on state finances from changes in federal government policy related to National Health Care Reform and federal deficit reduction. The state expects to receive additional revenue from National Health Care Reform as the federal reimbursement rate for newly eligible state plan members who are under 133% of the Federal Poverty Line, will increase to 75% in 2014 and 90% in 2020. Enrollment in Medicaid, however, is also expected to increase, putting additional cost pressures on the state-run health care system.

The Commonwealth is also monitoring the potential impact on the state budget of policies to reduce the federal deficit. It is reasonable to assume that the state's budget will be impacted directly through reduced federal reimbursements and the potential loss of jobs in defense and other key industries. The state may also be impacted indirectly in the event that federal budget cuts increase the level of services that states governments are

⁴⁸ Lav, Iris J. “PAYGO: Improving State Budget Discipline While Retaining Flexibility.” Center on Budget and Policy Priorities. September 2011.

required to provide. These impacts will continue be monitored going forward, consistent with the GASB proposed standard for a narrative related to interdependencies on other government entities.

Appendix A - GLOSSARY⁴⁹

Caseload Forecasting Office: Function within the Commonwealth Performance, Accountability and Transparency (CPAT) office charged with forecasting caseloads for “state-subsidized childcare, MassHealth, emergency assistance and housing programs, the group insurance commission, direct benefits provided by the department of transitional assistance” promoting “accuracy and transparency in all caseload forecasts” and performing “other related economic forecasts.” For more detail see M.G.L. Chapter 7 Section 4R.

Commonwealth’s Debt Affordability Analysis: The Patrick-Murray Administration’s formal analysis to ensure a transparent, rational policy for determining the annual bond cap. See http://www.mass.gov/bb/cap/fy2009/dnld/fy12capplan_a.pdf

Commonwealth’s Office of Tax Policy Analysis (OTPA): The Office of Tax Policy Analysis provides tax revenue forecasts, statistics on the Massachusetts tax system and estimates the fiscal impact of tax law changes. The OTPA is part of the Department of Revenue.

Congressional Budget Office (CBO): Since its founding in 1974, the Congressional Budget Office has produced independent, nonpartisan analysis of economic and budgetary issues to support the Congressional budget process.⁵⁰

Cyclical Deficit: Budget imbalance when the economy is operating below its sustainable capacity (i.e. below full employment), reflected in a shortfall in tax revenue and higher welfare spending compared to the level that would be expected if the economy were operating at its sustainable capacity (i.e. at full employment).

Cyclical Surplus: Budget imbalance when the economy is operating above its sustainable capacity (i.e. above full employment), reflected in excess tax revenue and lower welfare spending compared to the level that would be expected if the economy were operating at its sustainable capacity (i.e. at full employment).

Cyclical Imbalance: The presence of any cyclical deficit or surplus.

Debt Service: Annual payment of principal and interest on Commonwealth bonds. The Commonwealth borrows funds through the issuance of bonds to fund the majority of its capital investments. The issuance of bonds generates financial resources to fund capital programs, and also obligates future annual operating revenue for repayment of the bonds.

Dedicated revenues: Mandated expenditures for the Massachusetts Bay Transit Authority (MBTA) and the School Building Authority (SBA), both of which are tied to the sales tax.

⁴⁹ Various technical definitions are from Hubbard, R. Glenn, and Anthony Patrick O’Brien. *Economics*. 3rd Edition. December 2009.

⁵⁰ Congressional Budget Office. Overview. <http://www.cbo.gov/about/overview>

Fringe recoveries: Fringe recoveries represent the state's share of fringe benefit costs – health insurance, pensions and terminal leave salaries – on all Federal grant and other non-budgetary accounts. The assessment of fringe benefits on Federal funds is mandated by section 6B of Chapter 29 of the Massachusetts General Laws. Section 5D of the same law extends that assessment to all other funds of the Commonwealth except the General Fund.

GASB: The Government Accounting Standards Board is an independent body that sets accounting policies for government entities.

GFOA: The Government Finance Officers Association's mission is to enhance and promote the professional management of governments for the public benefit by identifying and developing financial policies and best practices and promoting their use through education, training, facilitation of member networking, and leadership.⁵¹

Gross Domestic Product (GDP): The market value (not quantity) of all final goods and services produced within the borders of a country within a specific time period, usually a calendar quarter or a year.

Gross State Product (GSP): The market value of all final goods and services produced within the borders of a state during within a specific time period, usually a calendar quarter or a year.

Inflation Rate: The percentage change in various prices indices, such as the consumer price index, from one period to the next.

Long-Term Liabilities: obligations which are not going to be paid for at least one year. These include future pension benefits, retiree health care benefits, and debt service payments.

Off Budget Trust Funds: Deposits and expenditures associated with the Pension Fund, State Retiree Benefit Trust Fund, Commonwealth Care Trust Fund, and Medical Assistance Trust Fund.

Other Post-Employment Benefits (OPEB): OPEB includes Post-Employment healthcare benefits as well as other retirement benefits provided separately from a pension plan, excluding benefits that are associated with termination.

Stabilization Fund: The Stabilization Fund accounts for amounts calculated in accordance with State Finance Law (Chapter 29, Section 5c of the General Laws) and maintains a reserve to enhance the Commonwealth's fiscal stability; It is a reserve of surplus revenues to be used for the purposes of: (1) covering revenue shortfalls, (2) covering state or local losses of federal funds, or (3) for any event which threatens the health, safety or welfare of the people or the fiscal stability of the Commonwealth or any of its political subdivisions. The fund is sometimes referred to as the state's "rainy day fund," serving as a source of financial support for the state

⁵¹ GFOA. About Us. Mission Statement.

http://www.gfoa.org/index.php?option=com_content&task=view&id=76&Itemid=96

budget in times of slow or declining revenue growth and as the primary source of protection against having to make drastic cuts in state services in periods of economic downturns.

State Retiree Benefit Trust Fund: Fund that invests assets allocated by the state to fund health care benefits of retired government employees.

Steady-State: A stable economy at full employment that is growing at a steady rate.

Structural Balance: Achieved when budgetary spending is based on sustainable levels of revenues, excluding fluctuations that can occur as a result of economic cycles; absence of a structural deficit

Structural Deficit: When recurring government spending exceeds the recurring revenue that is associated with the economy operating at a sustainable level of capacity (or full employment)

Sustainable Capacity: When the economy is operating at full employment

Total Budget Gap: The difference between total revenues and total government spending; comprised of both cyclical and structural components.

Trend-Line: Based on an estimate of what tax revenue would be in each year if the economy were at full employment.

Appendix A: Scenario Analysis

Key Assumptions

	Scenario 1 Base Case	Scenario 2 Structural Balance	Scenario 3 Slow Recovery
<u>Long-Term Macroeconomic Assumptions</u>			
Real Growth ¹	2.10%	2.10%	2.10%
Inflation ²	2.30%	2.30%	2.30%
Massachusetts Gross State Product (MA GSP)	4.4%	4.4%	4.4%
Tax Revenue			
- FY14 - FY16	6.0%	6.0%	4.4%
- FY17	4.4%	4.4%	4.4%
Excess Health Care Cost Growth ³	1.8%	0.0%	1.8%
<p>1 A & F estimate based on long - term projections from outside economists.</p> <p>2 A & F and OTPA estimates for FY 2014 - FY 2012 based on multiple sources.</p> <p>3 Based on MA excess growth estimate of 1.8% during 1991-2009 and informed by range of 1.7%-2.0% per CBO. "CBO's 2011 Long-Term Budget Outlook." Chapter 3. June 2011.</p>			

Scenario 1: Base Case – Economic Recovery & Excess Health Care Cost Growth
FISCAL YEAR 2013 - 2017

	FY 2013 Budget	FY2014	FY2015	FY2016	FY2017
<u>REVENUE / OTHER CASH INFLOWS</u>					
Tax Revenue	22,104	23,382	24,785	26,272	27,428
Federal Reimbursements	8,015	8,632	9,189	9,788	10,432
Departmental Revenue	3,211	3,275	3,340	3,407	3,475
Transfers From Off Budget Trust Funds	1,765	1,708	1,747	1,788	1,831
Total Revenue / Cash Inflow	35,095	36,996	39,061	41,255	43,166
<u>SPENDING / OTHER CASH OUTFLOWS</u>					
Budgetary Spending	30,207	31,763	33,417	35,175	37,045
Dedicated Revenue	1,539	1,630	1,723	1,821	1,907
Sub-Total On Budget	31,745	33,393	35,140	36,996	38,953
Transfers to Off Budget Trust Funds	3,655	3,848	4,069	4,303	4,552
Total Spending / Cash Outflow	35,400	37,241	39,209	41,299	43,505
Use of Stab Fund / Budget Gap Before Solutions*	(305)	(245)	(148)	(44)	(339)
<u>REVENUE GROWTH RATES</u>					
Tax Revenue	5.2%	5.8%	6.0%	6.0%	4.4%
Federal Reimbursements	2.4%	7.7%	6.5%	6.5%	6.6%
Departmental Revenue	2.6%	2.0%	2.0%	2.0%	2.0%
Transfers From Off Budget Trust Funds	-9.1%	-3.3%	2.3%	2.4%	2.4%
Total Growth	3.5%	5.4%	5.6%	5.6%	4.6%
Total Growth ex. Federal Reimbursements	3.8%	4.7%	5.3%	5.3%	4.0%
<u>SPENDING GROWTH RATES</u>					
Budgetary Spending	3.0%	5.2%	5.2%	5.3%	5.3%
Dedicated Revenue	5.2%	5.9%	5.7%	5.7%	4.8%
Transfers to Off Budget Trust Funds	3.7%	5.3%	5.7%	5.7%	5.8%
Total Growth	3.2%	5.2%	5.3%	5.3%	5.3%
Total Growth ex. Federal Reimbursements	3.4%	4.5%	4.9%	5.0%	5.0%
<u>STABILIZATION FUND BALANCE</u>					
Beginning Balance	1,352	1,047	802	654	610
*Use of Stab Fund / Budget Gap Before Solutions	(305)	(245)	(148)	(44)	(339)
Ending Balance / (Deficit) Before Solutions	1,047	802	654	610	271

Notes:

- (1) Tax revenue growth of 5.8% in FY 2014 vs 6.0% in the long-term revenue forecast is the result of reducing the FY 2014 forecast by the delay in implementing FAS 109, a one-time solution included in the proposed FY 2013 budget.
- (2) Use of Stab Fund / Budget Gap Before Solutions for FY 2013 represents the net use of Stabilization Fund balances, taking into account other one-time solutions and the \$95 M projected deposit into the stabilization fund associated with excess capital gains revenue.
- (3) Growth in federal reimbursements of 7.8% in FY 2014 is the result of the assumption that MassHealth reimbursements increase as a ratio of spending based on the five-year trend of 46.2% which is higher than the ratio of 45.3% that is implicit in the proposed FY 2013 budget.
- (4) Transfers from Off budget funds decrease by 9.1% in FY 2013 and 3.3% in FY 2014 as a result of reduced dependency on one-time solutions including the amount of property sales and transfers from authorities.
- (5) Health care related spending is comprised MassHealth, the Group Insurance Commission (GIC), the State Retiree Benefits Trust Fund (SRBTF), and the Commonwealth Care Trust Fund.

Scenario 2: Structural Balance – Economic Recovery & No Excess Health Care Cost Growth
FISCAL YEAR 2013 - 2017

	FY 2013 Budget	FY2014	FY2015	FY2016	FY2017
<u>REVENUE / OTHER CASH INFLOWS</u>					
Tax Revenue	22,104	23,382	24,785	26,272	27,428
Federal Reimbursements	8,015	8,533	8,977	9,447	9,945
Departmental Revenue	3,211	3,275	3,340	3,407	3,475
Transfers From Off Budget Trust Funds	1,765	1,704	1,740	1,776	1,814
Total Revenue / Cash Inflow	35,095	36,894	38,842	40,903	42,662
<u>SPENDING / OTHER CASH OUTFLOWS</u>					
Budgetary Spending	30,207	31,544	32,947	34,421	35,968
Dedicated Revenue	1,539	1,630	1,723	1,821	1,907
Sub-Total On Budget	31,745	33,173	34,670	36,241	37,875
Transfers to Off Budget Trust Funds	3,655	3,827	4,024	4,231	4,450
Total Spending / Cash Outflow	35,400	37,001	38,694	40,472	42,325
Use of Stab Fund / Budget Gap Before Solutions*	(305)	(107)	147	431	337
<u>REVENUE GROWTH RATES</u>					
Tax Revenue	5.2%	5.8%	6.0%	6.0%	4.4%
Federal Reimbursements	2.4%	6.5%	5.2%	5.2%	5.3%
Departmental Revenue	2.6%	2.0%	2.0%	2.0%	2.0%
Transfers From Off Budget Trust Funds	-9.1%	-3.5%	2.1%	2.1%	2.1%
Total Growth	3.5%	5.1%	5.3%	5.3%	4.3%
Total Growth ex. Federal Reimbursements	3.8%	4.7%	5.3%	5.3%	4.0%
<u>SPENDING GROWTH RATES</u>					
Budgetary Spending	3.0%	4.4%	4.4%	4.5%	4.5%
Dedicated Revenue	5.2%	5.9%	5.7%	5.7%	4.8%
Transfers to Off Budget Trust Funds	3.7%	4.7%	5.1%	5.1%	5.2%
Total Growth	3.2%	4.5%	4.6%	4.6%	4.6%
Total Growth ex. Federal Reimbursements	3.4%	4.0%	4.4%	4.4%	4.4%
<u>STABILIZATION FUND BALANCE</u>					
Beginning Balance	1,352	1,047	940	1,088	1,519
*Use of Stab Fund / Budget Gap Before Solutions	(305)	(107)	147	431	337
Ending Balance / (Deficit) Before Solutions	1,047	940	1,088	1,519	1,856

Scenario 3: Limited Recovery & Excess Health Care Cost Growth

FISCAL YEAR 2013 - 2017

	FY 2013 Budget	FY2014	FY2015	FY2016	FY2017
<u>REVENUE / OTHER CASH INFLOWS</u>					
Tax Revenue	22,104	23,029	24,042	25,100	26,205
Federal Reimbursements	8,015	8,632	9,189	9,788	10,432
Departmental Revenue	3,211	3,275	3,340	3,407	3,475
Transfers From Off Budget Trust Funds	1,765	1,708	1,747	1,788	1,831
Total Revenue / Cash Inflow	35,095	36,643	38,318	40,083	41,943
<u>SPENDING / OTHER CASH OUTFLOWS</u>					
Budgetary Spending	30,207	31,763	33,417	35,175	37,045
Dedicated Revenue	1,539	1,618	1,698	1,781	1,865
Sub-Total On Budget	31,745	33,381	35,115	36,956	38,911
Transfers to Off Budget Trust Funds	3,655	3,848	4,069	4,303	4,552
Total Spending / Cash Outflow	35,400	37,229	39,184	41,259	43,463
Use of Stab Fund / Budget Gap Before Solutions*	(305)	(586)	(865)	(1,175)	(1,520)
<u>REVENUE GROWTH RATES</u>					
Tax Revenue	5.2%	4.2%	4.4%	4.4%	4.4%
Federal Reimbursements	2.4%	7.7%	6.5%	6.5%	6.6%
Departmental Revenue	2.6%	2.0%	2.0%	2.0%	2.0%
Transfers From Off Budget Trust Funds	-9.1%	-3.3%	2.3%	2.4%	2.4%
Total Growth	3.5%	4.4%	4.6%	4.6%	4.6%
Total Growth ex. Federal Reimbursements	3.8%	3.4%	4.0%	4.0%	4.0%
<u>SPENDING GROWTH RATES</u>					
Budgetary Spending	3.0%	5.2%	5.2%	5.3%	5.3%
Dedicated Revenue	5.2%	5.1%	5.0%	4.9%	4.8%
Transfers to Off Budget Trust Funds	3.7%	5.3%	5.7%	5.7%	5.8%
Total Growth	3.2%	5.2%	5.3%	5.3%	5.3%
Total Growth ex. Federal Reimbursements	3.4%	4.4%	4.9%	4.9%	5.0%
<u>STABILIZATION FUND BALANCE</u>					
Beginning Balance	1,352	1,047	461	(404)	(1,580)
*Use of Stab Fund / Budget Gap Before Solutions	(305)	(586)	(865)	(1,175)	(1,520)
Ending Balance / (Deficit) Before Solutions	1,047	461	(404)	(1,580)	(3,100)

Appendix C

Current Funding Schedule¹

Fiscal Year	Amortization of Accrued		Total	Unfunded Liability Beginning of FY 2012
	Normal Cost	Actuarial Liability		
2011	311,246	1,130,754	1,442,000	20,794,055
2012	328,364	1,149,636	1,478,000	21,333,091
2013	346,424	1,205,576	1,552,000	21,896,952
2014	365,478	1,264,522	1,630,000	22,449,131
2015	385,579	1,342,421	1,728,000	22,985,534
2016	406,786	1,424,214	1,831,000	23,485,142
2017	429,159	1,511,841	1,941,000	23,940,867
2018	452,763	1,651,888	2,104,651	24,343,020
2019	477,665	1,717,964	2,195,628	24,632,641
2020	503,936	1,786,682	2,290,619	24,877,408
2021	531,653	1,858,150	2,389,802	25,070,872
2022	560,894	1,932,476	2,493,369	25,205,939
2023	591,743	2,009,775	2,601,517	25,274,819
2024	624,289	2,090,166	2,714,454	25,268,956
2025	658,625	2,173,772	2,832,397	25,178,969
2026	694,849	2,260,723	2,955,572	24,994,570
2027	733,066	2,351,152	3,084,218	24,704,492
2028	773,384	2,445,198	3,218,582	24,296,398
2029	815,920	2,543,006	3,358,926	23,756,787
2030	860,796	2,644,726	3,505,522	23,070,895
2031	908,140	2,750,515	3,658,655	22,222,585
2032	958,087	2,860,536	3,818,623	21,194,222
2033	1,010,782	2,974,957	3,985,740	19,966,550
2034	1,066,375	3,093,956	4,160,331	18,518,548
2035	1,125,026	3,217,714	4,342,740	16,827,276
2036	1,186,902	3,346,422	4,533,325	14,867,712
2037	1,252,182	3,480,279	4,732,461	12,612,571
2038	1,321,052	3,619,491	4,940,543	10,032,112
2039	1,393,710	3,764,270	5,157,980	7,093,925
2040	1,470,364	3,914,841	5,385,205	3,762,705
2040 END	1,551,234		1,551,234	0

¹ The funding schedule is based on the January 1, 2010 Commonwealth Actuarial Valuation. The actuarial value of assets as of January 1, 2011 is 110% of market value (the 110% limit has applied as of January 1, 2009, 2010, and 2011), and the unfunded actuarial liability decreased from \$20.0 billion on January 1, 2010 to \$18.6 billion on January 1, 2011. However, the unfunded liability is expected to increase in the ensuing years as remaining 2008 investment losses are recognized and the 90% - 110% corridor no longer applies.

Appendix D

The development of policy rules using the Total Budget Gap formula is provided below:

1. Total Budget Gap = Structural Imbalance + Cyclical Imbalance

Re-arranging terms:

2. Structural Imbalance = Total Budget Gap – Cyclical Imbalance

Replacing Total Budget Gap with the negative value of One-Time Solutions OR Stabilization Fund deposits:

- 3. a) During Cyclical Deficit: Structural Imbalance = Cyclical Deficit – One-Time Solutions**
Therefore, IF One-Time Solutions \leq Cyclical Deficit, THEN **Structural Surplus/Balance**
- b) During Cyclical Surplus: Structural Imbalance = Stab Fund Deposits – Cyclical Surplus**
Therefore, IF Stab Fund Deposits \geq Cyclical Surplus, THEN **Structural Surplus/Balance**